Pine Creek/Sulphurbeds Existing Conditions

Four nested frequency tend studies were read in 2008 on the Pine Creek/Sulphurbeds Allotment PC-PC-N1, PC-CC-N1, PC-SB-N1, and PC-WC-N1. It was the initial reading for all of them except PC-PC-N1 which was read in 1985. Data collected from the three studies is presented below.

PC-PC-N1 Summary – This study is located in the Pine Creek Pasture. The ground cover measured at this site is 65.8%. There were 27 different plant species recorded at this site. The Simpson's Index for Diversity for this site is .89. The Resource Value Rating (RVR) for this site is low medium with a score of 5. The vegetation frequency index is medium with a score of 1113. The relative frequency grass/grass like plants is 52.1% the relative frequency of forbs is 49.9% and the relative frequency of shrubs/trees is 4.9%. The relative frequency of annual taxa is 40.2% and perennial taxa is 59.8%. The relative frequency of introduced species is 41.5%. There were 3 invasive species recorded at this site with a relative frequency of 40.1%. There were 3 poisonous species recorded with a relative frequency of 7.2%.

The grass with the highest relative frequency at this site is *Bromus tectorum* (15.72%). The forb with the highest relative frequency is *Alyssum desertorum* (21.38%). The shrub/tree with the highest relative frequency is *Artemisia tridentata var.vaseyana* (3.32%).

This study was read previously in August of 1985. When the 2008 reading is compared with the 1985 reading study PC-PC-N1 showed that the ground cover is down from 73.3% in 1985. There was more *Bromus tectorum* on the site. *Poa secunda* was about the same and grasses found in 1985 (*Agropyron spicatum, Poa fendleriana,* and *Sitanion hystrix)* were not found in 2008. Grasses found on this site in 2008 that were not present in 1985 are *Agropyron cristatum, Agropyron intermedium, Elymus elymoides, Bromus inermis,* and *Elymus smithi.* There were 16 forbs recorded in 1985 and 15 recorded in 2008. *Artemisia tridentata* and *Juniperus osteosperma* have been reduced and *Quercus gambelii* and *Artemisia ludoviciana* are present.

In 1985 the overall RVR rating was the same and the vegetation frequency index is medium with a score of 1200. There were 25 different plant species recorded at this site. The Simpson's Index for Diversity for this site is .91. The relative frequency grass/grass like plants is 33.2% the relative frequency of forbs is 58.6% and the relative frequency of shrubs/trees is 8.3%. The relative frequency of annual taxa is 37% and perennial taxa is 63%. The relative frequency of introduced species is 12%. There were 2 invasive species recorded at this site with a relative frequency of 12.9%. There were 2 poisonous species recorded with a relative frequency of 17.8%.

PC-CC-N1 Summary - This study is located in the Cove Creek Pasture. The ground cover measured at this site is 60.8%. There were 15 different plant species recorded at this site. The Simpson's Index for Diversity for this site is .87. The Resource Value Rating (RVR) for this site is medium with a score of 6. The vegetation frequency index

is medium with a score of 1161. The relative frequency grass/grass like plants is 66.9% the relative frequency of forbs is 31.7% and the relative frequency of shrubs/trees is 1.4%. The relative frequency of annual taxa is 40.1% and perennial taxa is 59.9%. The relative frequency of introduced species is 52.9%. There were 4 invasive species recorded at this site with a relative frequency of 40%. There were no poisonous species recorded.

The grass with the highest relative frequency at this site is *Bromus inermis* (21.1%). The forb with the highest relative frequency is *Alyssum desertorum* (16.8%). The shrub/tree with the highest relative frequency is *Quercus gambelii* (1.21%).

PC-SB-N1 - This study is located in the Sulphurbeds Pasture. The ground cover measured at this site is 63.3%. There were 14 different plant species recorded at this site. The Simpson's Index for Diversity for this site is .83. The Resource Value Rating (RVR) for this site is medium with a score of 6. The vegetation frequency index is low-medium with a score of 879. The relative frequency grass/grass like plants is 82.5% the relative frequency of forbs is 14.9% and the relative frequency of shrubs/trees is 2.6%. The relative frequency of annual taxa is 29.5% and perennial taxa is 70.5%. The relative frequency of introduced species is 65.1%. There were 5 invasive species recorded at this site with a relative frequency of 31.7%. There were no poisonous species recorded.

The grass with the highest relative frequency at this site is *Agropyron cristatum* (28.44%). The forb with the highest relative frequency is *Alyssum desertorum* (10.13%). The shrub/tree with the highest relative frequency is *Chrysothamnus nauseosus* (2.28%).

PC-WC-N1 - This study is located in the Wild Cat Pasture. The ground cover measured at this site is 52.8%. There were 37 different plant species recorded at this site. The Simpson's Index for Diversity for this site is .93. The Resource Value Rating (RVR) for this site is medium with a score of 6. The vegetation frequency index is medium with a score of 1082. The relative frequency grass/grass like plants is 41.3% the relative frequency of forbs is 54.9% and the relative frequency of shrubs/trees is 3.8%. The relative frequency of annual taxa is 13.9% and perennial taxa is 87.1%. The relative frequency of introduced species is 18.4%. There was 1 invasive species recorded at this site with a relative frequency of .2%. There was 1 noxious weed species present with a relative frequency of .2% and 1 poisonous species recorded with a relative frequency of .3%.

The grass with the highest relative frequency at this site is *Bromus inermis* (15.16%). The forb with the highest relative frequency is *Stellaria jamesiana* (6.65%). The shrub/tree with the highest relative frequency is *Symphoricarpos oreophilus* (2.59%).